

#### REMARKS

Reconsideration and allowance of pending Claims 1-3, 5-16, 34, and 37-42 in view of the foregoing amendments and the following remarks, is respectfully requested.

Editorial amendments have been made in various ones of the pending claims. Such amendments are intended to correct grammatical errors and other informalities found therein, as well as to correct formatting of the claims. To the extent that any of the amendments are intended to alter the scope of the claims, such amendments will be discussed below. Regardless, favorable consideration of the amendments is respectfully requested.

Claims 1 and 6 are currently amended to address the objections set forth on page 2 of the Office Action. Accordingly, Applicant respectfully requests that the objections to the claims be withdrawn.

#### REJECTIONS UNDER 35 U.S.C. §103(a)

The following rejections are outstanding under 35 U.S.C. §103(a):

- A. **Claims 1-3, 5-7, 11, 13, 34, and 37-42** were rejected as being unpatentable over Knight, *et al.*, (U.S. Patent No. 6,493,703; hereafter "Knight") in view of Williams, *et al.*, (U.S. Pub. App. No. 2004/0210550; hereafter "Williams") in view of Holtzman, *et al.*, (U.S. Patent No. 7,185,065; hereafter "Holtzman") in further view of Bates *et al.*, (U.S. Patent No. 6,963,902; hereafter "Bates") in further view of Presnell, *et al.*, (U.S. Patent No. 6,182,067; hereafter "Presnell");
- B. **Claims 8, 9, and 12** were rejected as being unpatentable over Knight in view of Williams, Holtzman, Bates, and Presnell, in further view of Official Notice; and
- C. **Claims 10 and 14-16** were rejected as being unpatentable over Knight in view of Williams, Holtzman, Bates, and Presnell, in further view of Vanderveldt, *et al.*, (U.S. Patent No. 6,266,668; hereafter "Vanderveldt").

Applicant respectfully traverses all of rejections (A) – (C) above, and further requests that the rejections be reconsidered and withdrawn.

***Rebuttal to Response to Arguments***

Applicant respectfully responds to the Office's "Response to Arguments," subsequent to Applicant's previous arguments filed 20 March 2009.

It is noted that the Applicant previously asserted that Knight fails to disclose or suggest "inferring labels that determine nature of a message within a thread and employing such labels for inferring relevance of the message to a search."

The Examiner respectfully disagreed and stated that Knight...

...discloses an invention wherein a reply positing in response to an original posting is tagged with a parameter field specifying that the reply should be classified in the same area as the original posting. Accordingly, for purposes of this examination, it is noted that said tagging with a parameter field would accurately read upon the recited limitation wherein "at least one of the features is based on inferred labels" as the invention disclosed in Knight tags the parameter field according to whether a positing is a reply or not (*i.e.*, an inferred label). Furthermore, wherein the reply posting is a response to an original posting, it would have been obvious to one of ordinary skill in the art that, given the broadest reasonable interpretation of "automatically derived from content," the tagging of reply positing would be "derived from content."

However, Applicant stands by the assertion that Knight fails to disclose or suggest "inferring labels that determine a nature of a message within a thread and employing such labels for inferring relevance of the message to a search." In particular, it is acknowledged in the "Response to Arguments" that Knight discloses "an invention wherein a reply posting in response to an original posting is tagged with a parameter field specifying that the reply should be classified in the same area as the original posting." Applicant submits that, if the posting is actually tagged, there is no need to infer a label from the content of the message to infer relevance of the message to a search, as in the pending claims. That is, *tagging*, as in Knight, is *explicit*, whereas *inferring*, as in the pending claims, is *implicit*.

Thus, to expedite the prosecution of the present application, but not in acquiescence of the outstanding rejections, **independent Claims 1 and 37 are currently amended** to replace “automatically derived from content” with the recitation of “automatically inferred from content.” Favorable consideration in view of the current amendments is respectfully requested.

#### Rejection A

The claimed subject matter generally relates to electronic data searches and more particularly to employing relevance function(s) to rank search results obtained from digital artifacts such as Usenet, a discussion thread, a blog, an archived community discussion, or a chat room. To this end, amended independent Claim 1 recites (emphasis added):

a function generator component that generates the relevance functions such that ordered search results are ordered based on their respective relevances;

wherein the search is selectively scoped based at least on a structure of the thread comprising the one or more messages,

wherein further at least one of the features is based on inferred labels on edges between an existing message in the thread and one or more of a parent or child of the message, and

wherein the labels determine a nature of a respective message in the thread and are automatically **inferred** from content of the one or more messages within the thread.

Similarly amended independent Claim 37 recites (emphasis added):

means for generating the relevance functions that facilitate ordering the search results based on their respective relevances,

wherein the search has variable scope based at least on a structure of the thread comprising the one or more messages comprising at least a message core with text of a single message within the thread and a message body including text of a plurality of messages structurally related to the single message within the thread, at least one of the features is based on labels on edges between a message in the thread and one or more of a parent or child of the message,

wherein the labels are automatically **inferred** from content of the one or more messages within the thread.

Knight *et al.*, Williams *et al.*, Holtzman, Bates *et al.*, and Presnell *et al.*, alone or in combination, fail to teach or suggest such claimed aspects.

Williams relates to facilitating a self organizing workforce of one or more workers through payment and recognition incentives, a set of configurable operating rules and a set of credentials to represent the reputations and organizational capital of individual workers. Williams further discloses a message board format to facilitate count of votes post credit, agreement or disagreement, named or anonymous posters and combining them with message board attributes such as thread depth etc. and semantic analysis techniques to extract concepts (Williams [0102]). In this context, although Williams teaches using thread properties such as thread depth with semantic analysis to extract concepts, it fails to teach or suggest scoping a search of a discussion board comprising messages based on a structure of the thread as recited in the subject claims, as in Claims 1 and 37.

Knight relates to monitoring the subscriber tastes and interests of online message board systems so that relevant content can be located extracted and presented in accordance with subscriber derived feedback information. Accordingly, Knight teaches performing queries on pre-defined logical groupings of subject matter already constructed for users' convenience (Knight col.15 lines 53-55) but fails to teach or suggest scoping a search based on a message structure. Knight does not teach inferring labels that determine nature of a message within a thread and employing such labels for inferring relevance of the message to a search. Knight fails to disclose or suggest "inferring labels that determine a nature of a message within a thread and employing such labels for inferring relevance of the message to a search." In particular, it is acknowledged in the "Response to Arguments" that Knight discloses "an invention wherein a reply posting in response to an original posting is tagged with a parameter field specifying that the reply should be classified in the same area as the original posting." Applicant submits that, if the posting is actually tagged, there is no need to infer a label from the content of the message to infer

relevance of the message to a search, as in the pending claims. That is, *tagging*, as in Knight, is *explicit*, whereas *inferring*, as in the pending claims, is *implicit*.

Thus, to expedite the prosecution of the present application, but not in acquiescence of the outstanding rejections, **independent Claims 1 and 37 are currently amended** to replace “automatically derived from content” with the recitation of “automatically inferred from content.” Favorable consideration in view of the current amendments is respectfully requested.

Holtzman relates to collecting and analyzing electronic discussion messages to categorize the message communications in order to identify trends and patterns in pre-determined markets. Accordingly, electronic messages and collected are analyzed in accordance with characteristics and data inherent in the messages. However, nowhere does Holtzman teach or suggest an analysis such that a search is scoped in accordance with a message structure as recited in Claims 1 and 37.

Bates relates to selectively displaying messages to a user. Based on the time of viewing a message and statistics on how many times a message is skipped, time scores and skip scores are calculated. When a user requests to view messages, they are displayed based on their respective time/skip scores in order to omit those with minimum time scores/maximum skip scores. However, Bates also fails to teach or suggest scoping search for messages based on a structure of the message as recited in Claims 1 and 37.

It is conceded in the Office Action that a combination of Knight, Williams, Holtzman, and Bates fails to teach or suggest the aforementioned aspects of independent Claims 1, 37. Presnell teaches search for terms at specific locations within documents such as title, abstract, body etc. However, this is not the same as scoping search over a message thread comprising one or more messages as messages within a discussion thread are not clearly formatted in the same manner as other documents. Web pages, which are normally retrieved by search engines such as those disclosed by Presnell facilitate searching via rich markup that is comprised within them. For example, a title or body of a web page

would clearly be placed appropriately within <TITLE> </TITLE> or <BODY> </BODY> tags. This facilitates search engines to identify specific locations within the HTML document to search. However, discussion threads within Usenet or chat rooms do not have such clearly formatted structure. The claimed subject matter provides a structure for a discussion thread and flexibly scoping a search over such structure. For example, independent Claim 37 and similarly dependent claim 42 provide for a thread structure comprising a message core with text of a single message and a message body including text of a plurality of messages structurally related to the single message. When searching this posted message, the message can be scoped at the root, body, core and/or child level.

In view of at least the foregoing, it is clear that none of the cited documents teach or suggest all aspects of the subject claims. Hence, Rejection A should be withdrawn.

#### Rejection B

As discussed *supra*, Knight, Williams, Holtzman, and Bates do not teach or suggest all the features with respect to amended independent Claim 1 (from which Claims 8, 9 and 12 depend). Examiner's Official Notice does not make up for the aforementioned deficiencies of the cited references. In view of at least the foregoing, it is clear that none of the cited documents and Official Notice teach or suggest all aspects of the subject claims. Hence, this rejection should be reconsidered and withdrawn.

#### Rejection C

As discussed *supra*, Knight, Williams, Holtzman, and Bates do not teach or suggest all the claim features with respect to amended independent Claim 1 (from which Claims 10 and 14-16 depend). Vanderveldt relates to a method of data mining wherein a search profile is created to determine topics of interest. These topics are output to a search specific tool that match the topics to web sites which are filtered to determine if they contain the relevant information before being presented to the user.

However, it does not make up for the aforementioned deficiencies of the cited references as it fails to teach or suggest scoping searches of discussion threads based on a structure of one or more messages being search. In view of at least the foregoing, it is clear that none of the cited documents teach or suggest all aspects of the subject claims. Hence, Rejection C should be reconsidered and withdrawn.

CONCLUSION

The remaining references of record have been considered, and it is respectfully submitted that they do not compensate for the deficiencies of the references cited in rejecting the pending claims. Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance, and a Notice to that effect is earnestly solicited.

Respectfully Submitted,

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Dated: August 5, 2009

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206-315-7912